Work Order ID 107451

September-24-13 1:16:40 PM

D2278

B107451

107451

Item ID: D2278 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Step Leg

Start Date: 9/24/13 **Start Qty:** 40.00 *40*

Required Date: 10/08/13 **Req'd Qty:** 40.00 *40*

Reference:

Cust Item ID:

Customer:

Run Start *NR1*

Stop *NR2*

Approvals: **Process Plan:** MLJ **Date:** 13-09-24 **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D2278	Rev F								
100	FLOW WATER JET	0.00				42	0		JM13-09-25
100									
Waterjet	**Memo**	0.00							
FLOW CNC Waterjet	1-Cut as per Dwg D2278 Dwg Rev: F Prog Rev: F 2- Deburr if necessary								
60x61.080									
110	QC2- Inspect parts off machine FAI/FAIB	0.00				42	0		JM13-09-25
110									
QC	**Memo**	0.00							
Quality Control									
			DAS 27 9-80						
120	QC8- Inspect parts - second check	0.00				42			
120									
QC	**Memo**	0.00	B925						
Quality Control									

DQA: _____ Date: _____

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

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Item ID: D2278 **Accept** *N900040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Step Leg

Start Date: 9/24/13 **Start Qty:** 40.00 *40*
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Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Chemical Conversion Coat per QSI005 4.1	0.00				42	8/13-10/7		
130 HandFinish	**Memo**	0.00							
Hand Finishing									
140	QC - Inspect Part Finish	0.00 DAS 27 9-89				42			
140 QC	**Memo**	0.00 8/13/17							
Quality Control									
150	Identify as per dwg & Stock Location G-A	0.00				42			13/11/11 DAS 36 9-89
150 Packaging	**Memo**	0.00							
Packaging									

DQA: _____ Date: _____

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

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- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	☐									
Equip/Tooling	☐									
Operator	☐									
Material	☐									
Setup	☐									
Other	☐									
Process	☐									
Supplier	☐									
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- ☐ Temperature/Cure
- ☐ Weld
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- ☐ Other

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Work Order ID 107451

September-24-13 1:16:40 PM

107451

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Item Name: Step Leg

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Run Start *NR1*

Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC21- Final Inspection - Work Order Release	0.00							
160									
QC	**Memo**	0.00							
Quality Control									

13-11-4

MF

13-11-01

DQA: _____ Date: _____

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	☐									
Equip/Tooling	☐									
Operator	☐									
Material	☐									
Setup	☐									
Other	☐									
Process	☐									
Supplier	☐									
Training	☐									
Unapproved	☐									

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- ☐ Folio
- ☐ Grain
- ☐ Hardware
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- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
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- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

Picklist Print

September-24-13 1:16:44 PM

Work Order ID: 107451 *107451*

Parent Item: D2278 *D2278*

Parent Item Name: Step Leg

Start Date: 9/24/13 **Required Date:** 10/08/13

Start Qty: 40.00 **Required Qty:** 40.00

Comments:

IPP Rev:A	New Issue	05-11-07	JLM
IPP Rev:B	Now 6061-T6	06-06-23	JLM
IPP Rev C	New flat pattern	08.01.11	EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.080		Purchased	No			100	sf	643.6080	0.9815	~~41.32632~~			
M6061T6S.080									**	42		JM 13-09-25	
6061-T6 .080 Sheet													

Location	Loc Qty	Loc Code	
MAT021	643.608		
125812	32.75		
m126309	363.5		
m126350	247.358		126350

DQA: _____ Date: _____

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Work Order Update ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	☐									
Equip/Tooling	☐									
Operator	☐									
Material	☐									
Setup	☐									
Other	☐									
Process	☐									
Supplier	☐									
Training	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
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☐ Crushed/Crimped
☐ Cuffs
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Ripples in Bend
☐ Torque Waves in Extrusion
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damaged
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drill Holes
☐ Drawing
☐ Finish
☐ Folio

☐ Grain
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☐ Power Loss/Surge

☐ Pressure/Forced
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled

☐ Other

_____
_____
_____

DART AEROSPACE LTD	Work Order:	107451
Description: Leg	Part Number:	D2278
Inspection Dwg: D2278 Rev: F		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

[X] First Article [ ] Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.354	+/-0.010	0.359"	–		V	JLM01
0.354	+/-0.010	0.352"	–		V	
16.46	+/-0.030	16.46"	–		T	JLM06
Ø0.128	+0.005/-0.000	0.130"	–		V	
R0.354	+/-0.030	0.354"	–		RG	
2.00	+/-0.030	2.010"	–		V	
4.74	+/-0.030	4.746"	–		V	
8.46	+/-0.030	8.467"	–		V	
0.213	+/-0.010	0.215"	–		V	
0.750	+/-0.010	0.750"	–		V	
0.080 thick	+/-0.010	0.079"	–		V	

DAS 27 9-89

Measured by:	JM	Audited by:		Prototype Approval:	N/A
Date:	13-09-25	Date:	13925	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.10.12	New Issue P/O D2582	KJ/JLM	
B	06.03.08	Dwg Rev. changed	KJ/JLM	
C	06.06.23	Dwg Rev. changed	KJ/JLM	
D	08.02.28	Dimensions updated per Dwg Rev F	KJ/DD	

DQA: _____ Date: _____

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WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

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- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

AGAINST DEPARTMENT/PROCESS

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- Crosstube ☐
- Water Jet ☐
- Engineering ☐
- Machining ☐
- Small Fab ☐
- Prod. Eng. Coor. ☐
- Quality ☐
- Thermoforming ☐
- Finishing ☐
- Rec/Store/Packaging ☐
- Other ☐
- Large Fab ☐
- Composite ☐
- Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	☐									
Equip/Tooling	☐									
Operator	☐									
Material	☐									
Setup	☐									
Other	☐									
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Supplier	☐									
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FAULT CATEGORY

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_____

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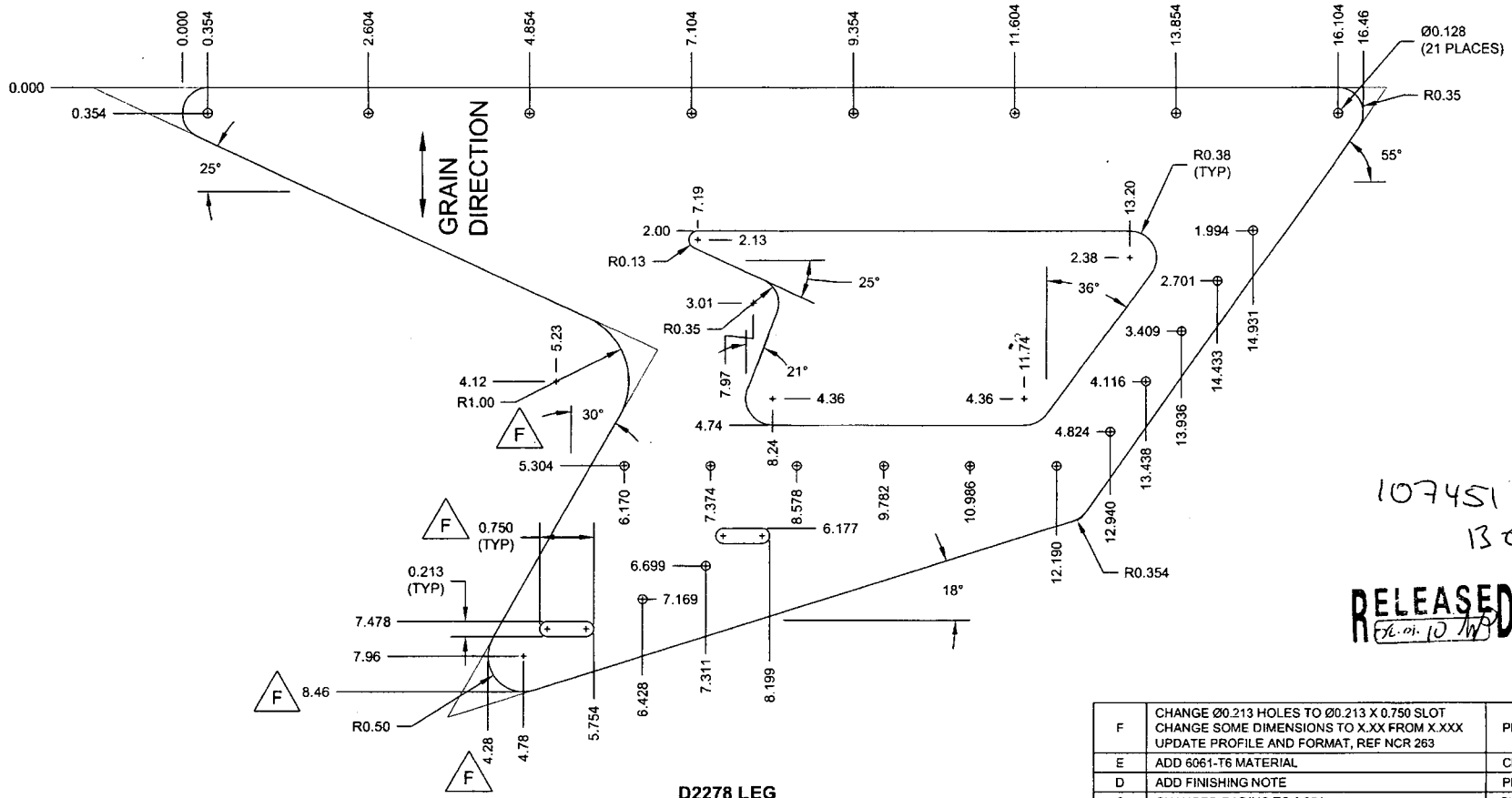

107451 MLJ
13-09-24

RELEASED

D2278 LEG

NOTES:

1) MATERIAL: 6061-T6 (OR -T62) ALUMINUM SHEET 0.080 THICK (PER QQ-A-250/11 OR AMS 4025/4027)
(REF DART SPEC M6061T6S.080)
OR
5052-H32 ALUMINUM SHEET 0.080 THICK (PER QQ-A-250/8 OR AMS 4016)
(REF DART SPEC M5052H32S.080)
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 0.45 lbs

REV.	DESCRIPTION	BY	DATE
F	CHANGE Ø0.213 HOLES TO Ø0.213 X 0.750 SLOT CHANGE SOME DIMENSIONS TO X.XX FROM X.XXX UPDATE PROFILE AND FORMAT, REF NCR 263	PH	07.12.27
E	ADD 6061-T6 MATERIAL	CB	06.05.29
D	ADD FINISHING NOTE	PH	05.11.14
C	CHANGED RADIUS TO 0.354	BW	95.02.16
B	CHANGED TO MATCH SPACERS	BW	94.11.08
A	NEW ISSUE	BW	94.10.13

DESIGN	RH	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RH	
CHECKED		DRAWING NO. D2278 — REV. F — SHEET 1 OF 1
MFG. APPR.		
APPROVED		TITLE LEG — SCALE 3:2
DE APPR.		
DATE	07.12.27	

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Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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FAULT CATEGORY

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